REMARKS

This Amendment, filed in reply to the Office Action dated April 7, 2005, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-5, 7 and 9-17 remain pending in the application and remain rejected under 35 U.S.C. § 102 as being anticipated by Rogers (previously of record). Applicant respectfully submits the following arguments for traversing the prior art rejections.

Applicant's invention relates to a medical image analysis method and system that is able facilitate abnormal tissue detection and also track the performance of the method and system based on the detection results. In an exemplary embodiment, abnormal tissue patterns are determined from an image and processed, such as via an abnormal pattern detection means (Fig. 1, element 30). Correction of the processed image comprises an assessment of whether the result of the abnormal pattern detection comprises a true positive, false positive, true negative or false negative, for example. Based on the result of the correction, the data resulting from the correction and also the result of the abnormal pattern detector can be related to each other for each of plural image items to determine how well the system is performing. The data on the abnormal pattern detection result and the corrected result can also be stored and used by an evaluator for later quantitative analysis of system performance.

Turning to the cited art, Rogers relates generally to a computer-aided abnormal tissue diagnosis, where determinations of abnormal patterns in images are grouped as S1-S4. S1 corresponds to images determined by a user to contain abnormal patterns. S2 corresponds to images determined by a computer program to contain abnormal patterns. S3 corresponds to

images in group S2 that the user also determines to include abnormal patterns. S4 comprises the combination of S1 images and S3 images, where both S1 and S3 are determined via user input.

The Examiner maintains that Rogers teaches each feature of claim 1. In the Response to Arguments section of the Office Action, the Examiner notes that the determination of S4 can be described mathematically as S4 = S1 ^ (S2 ^S3). The Examiner construes the computer-derived group S2 to be the processed detected pattern and construes the user-determined subset S3 to be the corrected pattern. The Examiner then contends that equation S4 provides a relation between S2 and S3. This rationale cannot support the rejection since the Examiner is engaging in double-counting of elements. The Examiner already relies upon the determination of S3 from S2 (S3 ^ S2) as corresponding to the correction aspect of independent claim 1. This same relation (S3 ^ S2) cannot also teach the relating function as claimed. Assuming *arguendo* that S4 determines an additional relation, that relation is between S1 and S3. The previous relation between S2 and S3 was already determined as corresponding to the "correction" and thus cannot serve to provide a separate "relating" aspect as claimed without improper use of double-counting.

By contrast, claim 1 describes a correction of the processed abnormal pattern detection and a further relation between the correction and the detected abnormality, thereby providing a basis for evaluating how well the method is able to perform. To the extent Rogers determines performance criteria, these are not necessarily determined using the data of the corrected abnormal pattern detection and the processed abnormal pattern as claimed. Therefore, independent claim 1 is not anticipated by Rogers.

According to the present invention, the process "relating and storing a result of the processed abnormal pattern to a result of the corrected abnormal pattern" refers to the following:

1. Storing both the result of the processed abnormal pattern and the result of the corrected abnormal pattern.

2. Storing the result of the processed abnormal pattern and the result of the corrected abnormal pattern so as to clarify the relationship of which result of the processed abnormal pattern correlates to which result of the corrected abnormal pattern, when reading out the stored results.

Both of the above aspects are described by the relating and storing features of claim 1. In this respect, the "storing" does not mean temporary storage during a processing flow but means filing.

In contrast, in Rogers the relating process [0141] and the storing process [0046] are not related to each other. Further, Rogers merely teaches storing an image [0046].

Therefore, Rogers does not teach or suggest "relating and storing a result of the processed abnormal pattern to a result of the corrected abnormal pattern".

As a benefit, in the present invention, the burden on the pattern reader can be reduced by displaying the detected results and then reading the pattern. Further, by the use of the detection with a CAD system, oversight in pattern reading of the pattern reader can be prevented. In addition, by adding the abnormal pattern which was not detected by the CAD system with the pattern reader, oversight in pattern reading of the CAD system can be prevented. In addition, improvement of the performance of the pattern reading can be achieved.

Because claims 3, 5 and 7 include features similar to that described above for claim 1, claims 3, 5 and 7 are also patentable for the reasons set forth above.

With further regard to the apparatus claims 5 and 7, these claims describe the means for relating corrected detection processing and the detection result. The Examiner had relied upon the determination of S1 ^ (S3 ^ S2) as corresponding to such a relating feature. However, in Rogers, this selection of S3 (and also S1) is performed by a user, and not an apparatus element. The decision in In re Bell, 26 USPQ2d 1529 (Fed. Cir. 1993) makes clear that method steps such as those performed by an operator, do not establish the presence of elemental features of claims for a composition, or an apparatus. Therefore, claim 5 is not anticipated for this additional reason. Claim 7, which includes a similar recitation, is also patentable on this basis. The remaining claims are patentable based on their dependency.

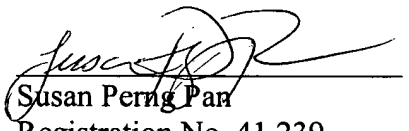
With further regard to claim 9, this claim describes that the corrected abnormal pattern includes a determination of a false negative, false positive, true negative or true positive condition. The Examiner relies on paragraph [0137] as teaching this feature. However, the cited paragraph does not relate to the determination of the group S3 which the Examiner has relied upon as providing the corrected abnormal pattern result. Therefore, claim 9 is patentable for this additional reason.

With further regard to claims 14-17, each of these claims describe processing of an automatic determination of the abnormal pattern, based on the prior detection result. The Examiner cites the computer determinations associated with S2 as corresponding to the automatic detection of abnormalities. However, the step S2 is not premised on a prior detection as claimed. Rather in Rogers, the determination of groups S2 and the user-determined group S1 are independent. Therefore, the mere inclusion of an automatic abnormal pattern detector in Rogers does not meet the requirements of claims 14-17.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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